# 12 August 2004

# LPE News

# Agenda

- Worldwide Energy Conference
- New Naval Petroleum Office LNO
- EOD Augmentation Efforts
- Engineer Master Plan Efforts
- Joint Operational Engineer Board (JOEB)
- Ongoing Experimentation

# Worldwide Energy Conference

- The Defense Energy Support Center's Worldwide Energy Conference 2004 will be held from 27-30 Sep 2004 at the Hyatt Regency Crystal City, 2799 Jefferson Davis Highway, Arlington VA 22202
- Access conference information at website www.desc.dla.mil/dcm/dcmpage.asp?linkid=wwec
- Access hotel information at 703-418-1234 and at website www.crystalcity.hyatt.com
- LPE POC: CWO5 Terry Kunneman, 703-695-9022

# New Naval Petroleum Office LNO

- CWO3 Danielle Cummins assumed duty as HQMC's Liaison Officer to the Naval Operational Logistics Support Center (NOLSC) DC Petroleum Office (formerly the Naval Petroleum Office).
- This new billet will assist installations primarily in MILCON, MR&E, API Award, Fuel Facility Survey (MID-909), Optimization Study, and FAS business.
- POC: danielle_cummins@navpetoff.navy.mil, 703-767-7326, DSN 427-7326.

# EOD Augmentatic

# Issue

- **The Marine Corps cannot field sufficient EOD forces to support MAGTF operations or support installation and air station commanders in their anti-terrorism/force protection (AT/FP) missions.**

# Background

- **<u>EOD Current Personnel Strength</u>**

  **Active:**

  **T/O: 39 officers and 338 enlisted**

  **ASR: 39 officers and 306 enlisted**

  **O/H: 34officers and 282 enlisted**

  **Reserve:**

  **Zero FSSG billet structure**

  **24 billets within Fourth Marine Air Wing (never filled)**

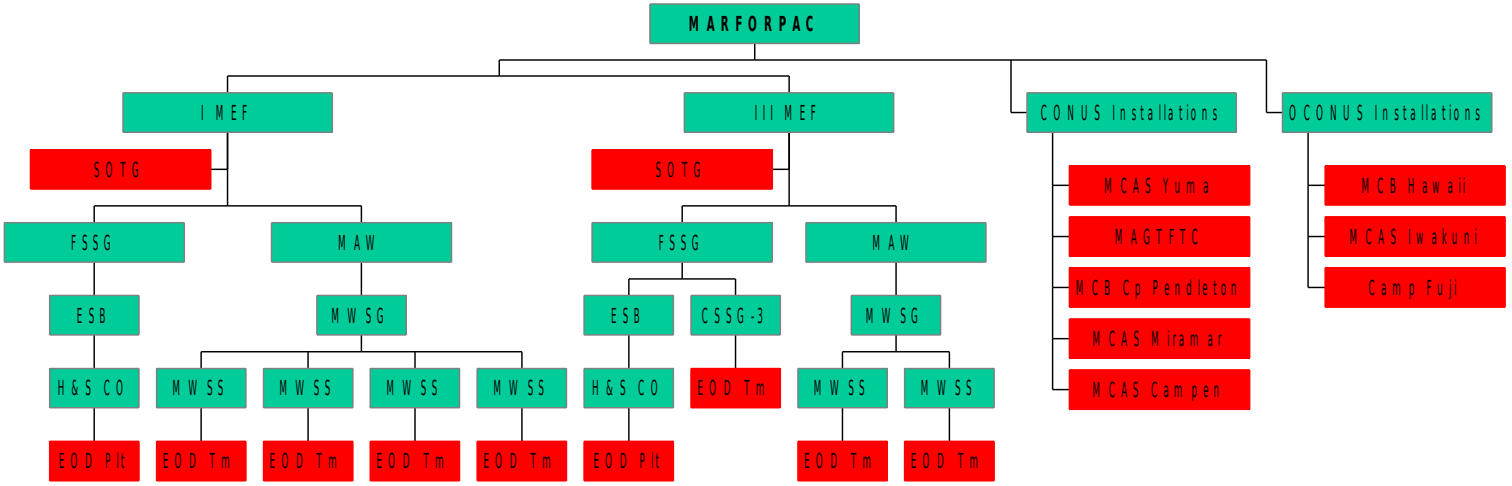
# USMC EOD

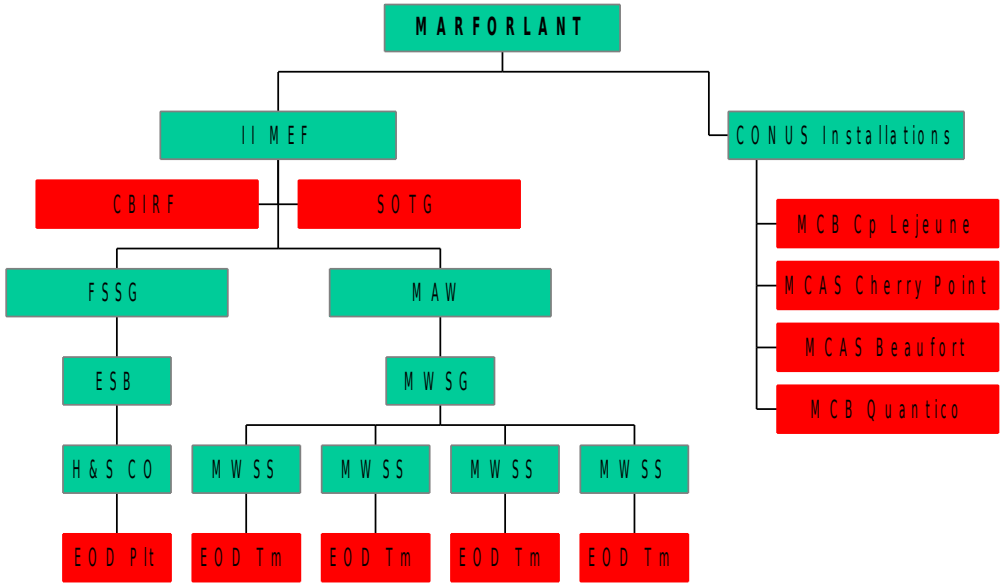
- Low Density, high demand MOS (378 Marines)
- All second term/lateral move Marines
- One year Joint EOD MOS qualifying school
- Significant Optempo challenge
  - 50%  of Operating Force EOD Marines deployed
- Attrition/retirement challenge
  - Relief
    - Additional EOD School Seats obtained for next two years
    - Request to MROC for additional EOD structure to provide warfighter with adequate support

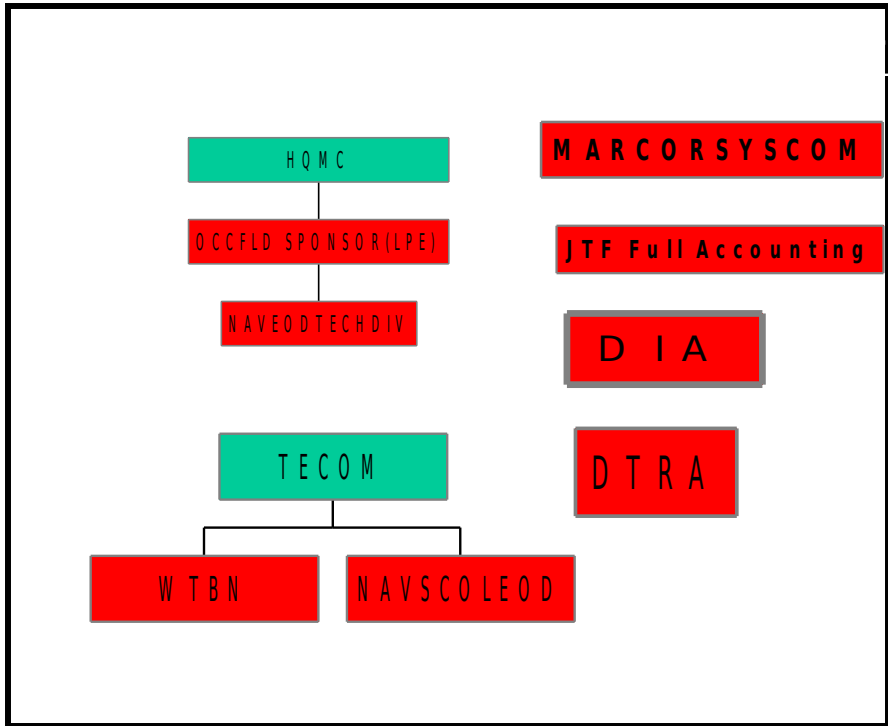
# Background Cont.

- **Ineffective Organization**
  - **27 EOD units support three MEF's and 12 Installations Global sourcing non-existent**
  - **Units too small to execute doctrinal missions or full AT/FP support**
  - **Ground Combat Elements receive little or no support**
  - **EOD teams unable to fully train to missions**

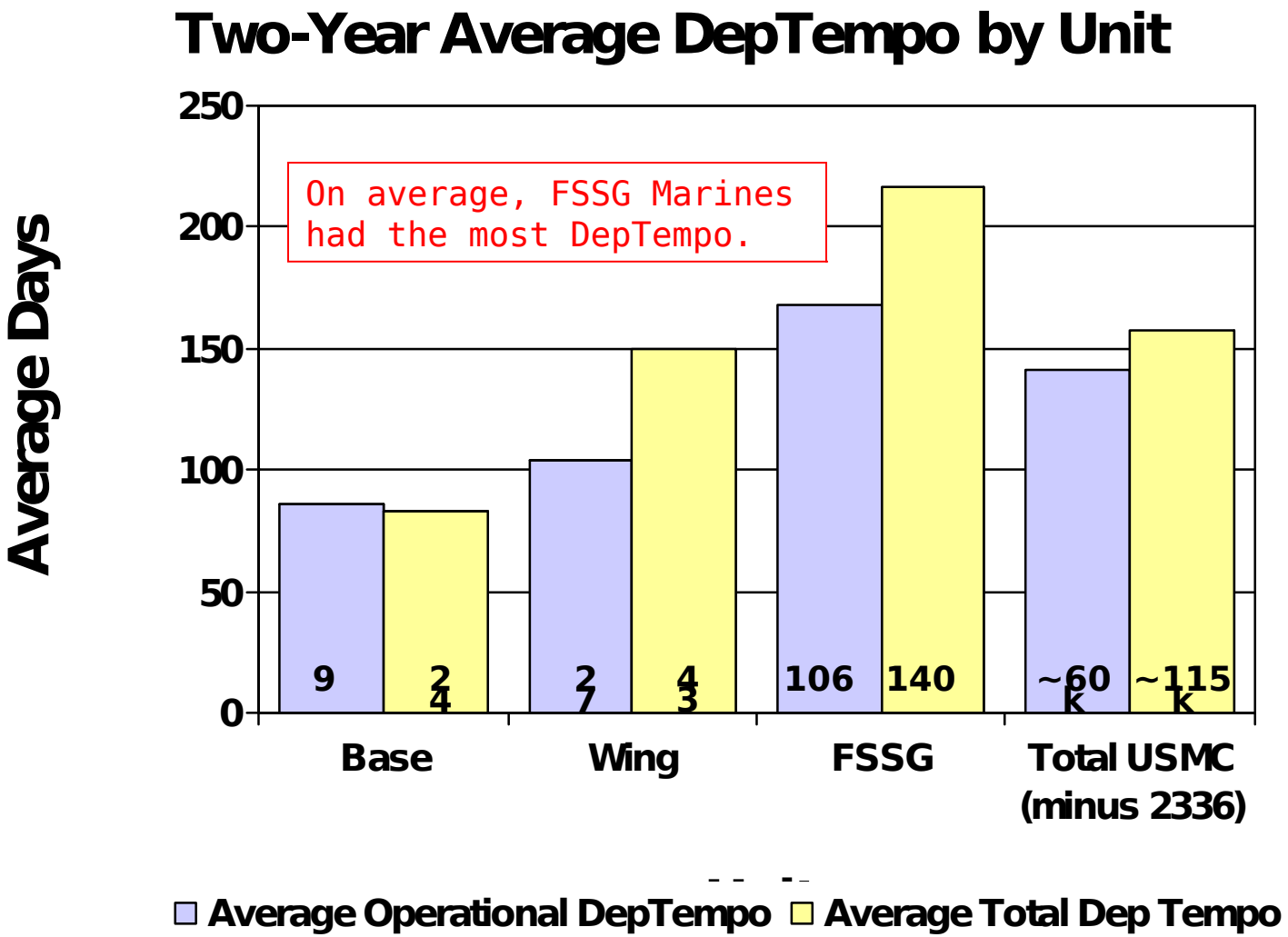
# Inadequate Cross-MAGTF Tasking Capability



# EOD (MOS 2336) Deployment Tempo




Data as of 23 Jul 2003. Includes DepTempo accumulated during previous two years.

# Requirements Development Process

- EOD review factors
  - OIF results
    - OIFCAT Interviews
    - Data calls from After Action Reports
    - Other Service Input
      - Ongoing Actions by currently deployed forces
- EOD Team Concept Development
- OIF-generated reorganization
- Base/Station Force Protection/Anti-Terrorism Requirements

# OIF Results

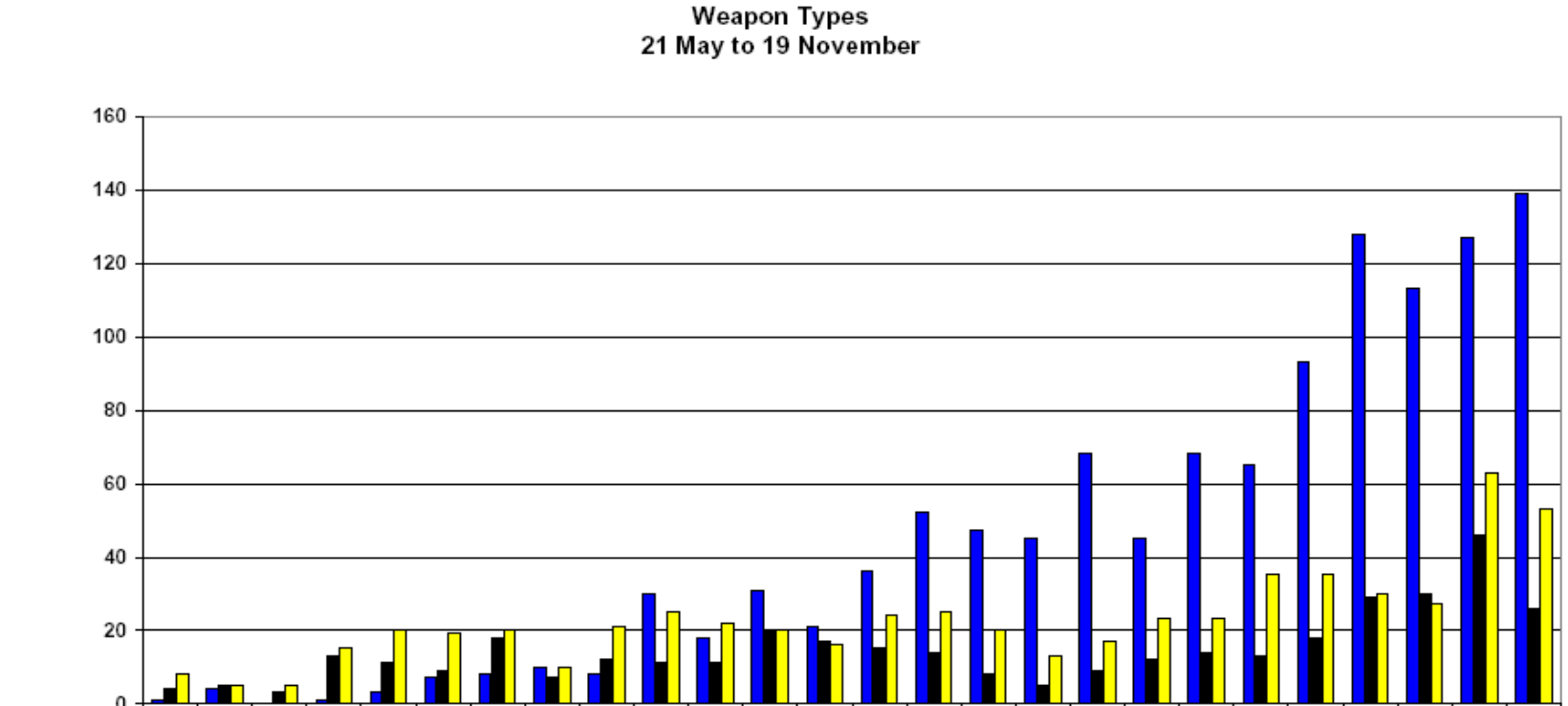
- Insufficient EOD capability
  - LNOs at MF/MEF Levels
  - Direct Support to Warfighters
  - General Support
  - FP/AT at home stations
- Complicated by massive UXO clearance challenge and IED proliferation

# Threat

***"Potential adversaries… compensate for U.S. conventional military superiority by developing asymmetric approaches and capabilities."***

**SECDEF's Transformation Planning**

# Iraqi Theater IED Statistics




| | Week-28May | Week-4Jun | Week-11Jun | Week-16Jun | Week-25Jun | Week-2Jul | Week-9Jul | Week-16Jul | Week-23Jul | Week-30Jul | Week-6Aug | Week-13Aug | Week-20Aug | Week-27Aug | Week-3Sep | Week-10Sep | Week-17Sep | Week-24Sep | Week-1Oct | Week-08Oct | Week-15Oct | Week-22Oct | Week-29Oct | Week-5Nov | Week-12Nov | Week-19Nov |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EXPLOSIVES | 1 | 4 | | 1 | 3 | 7 | 8 | 10 | 8 | 30 | 18 | 31 | 21 | 36 | 52 | 47 | 45 | 68 | 45 | 68 | 65 | 93 | 128 | 113 | 127 | 139 |
| RPG | 4 | 5 | 3 | 13 | 11 | 9 | 18 | 7 | 12 | 11 | 11 | 20 | 17 | 15 | 14 | 8 | 5 | 9 | 12 | 14 | 13 | 18 | 29 | 30 | 46 | 26 |
| SMALL ARMS | 8 | 5 | 5 | 15 | 20 | 19 | 20 | 10 | 21 | 25 | 22 | 20 | 16 | 24 | 25 | 20 | 13 | 17 | 23 | 23 | 35 | 35 | 30 | 27 | 63 | 53 |

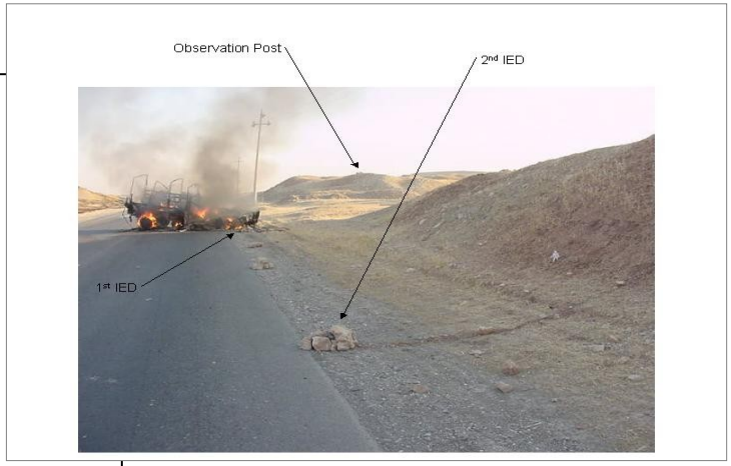
# Explosive Hazard Casualties

(as of 16 March 2004)

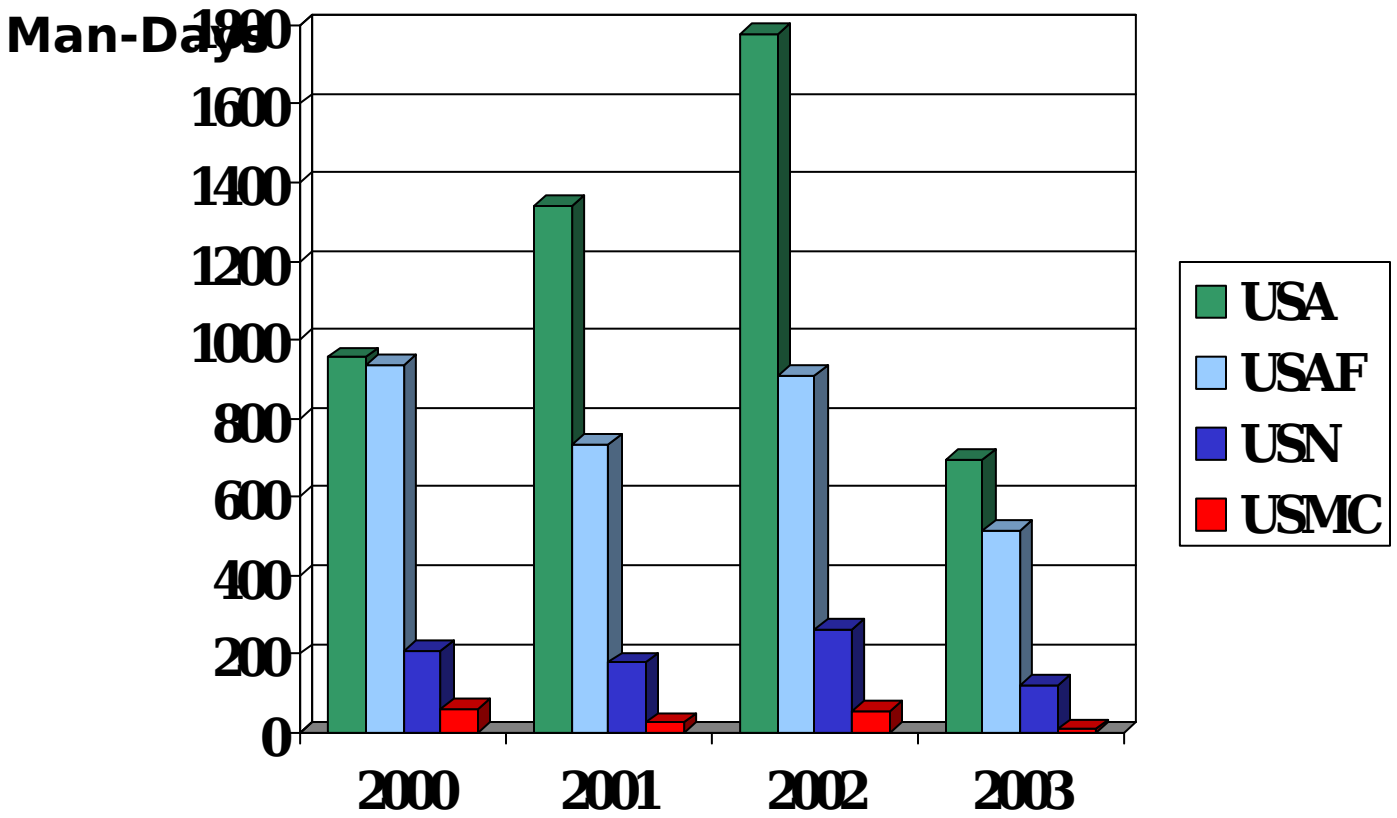
| Type | WIA | KIA |
|---|---|---|
| Mines | 70 | 4 |
| IEDs | 1098 | 101 |
| UXO/Sub-munitions | 39 | 6 |
| Total | 1207 | 111 |

# EOD Counter-IED Required Capabilities

- **Prevent introduction of IEDs within threat radius**
  - **Deny materials**
  - **Interdict enemy**
- **Detect / locate emplaced IEDs**
  - **HUMINT**
  - **Situational Awareness**
  - **Technology**
- **Render safe detected / located IE**
  - **Blow in place**
  - **Disruption**
  - **Hand entry**
- **Prevent functioning of emplaced but undetected IEDs**



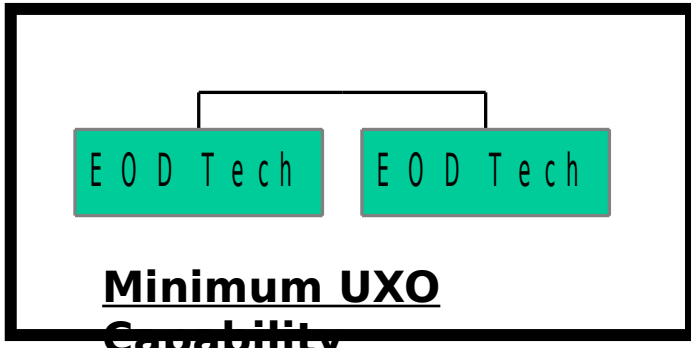
# Increased Very Important Person Protective Support Agency (VIPPSA) Support



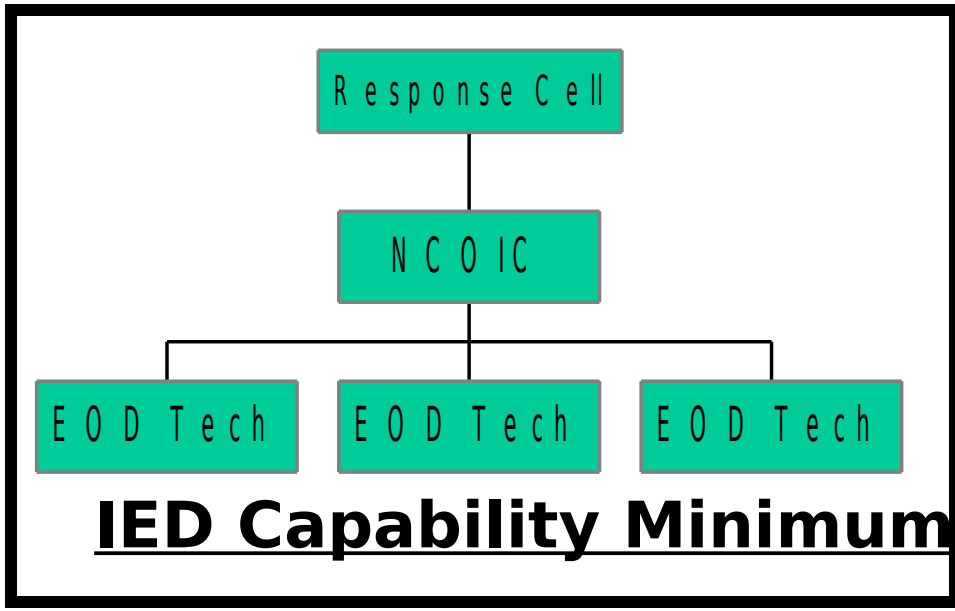

**Reduction in 2003 due to operational deployment of EOD**

# EOD Team Development

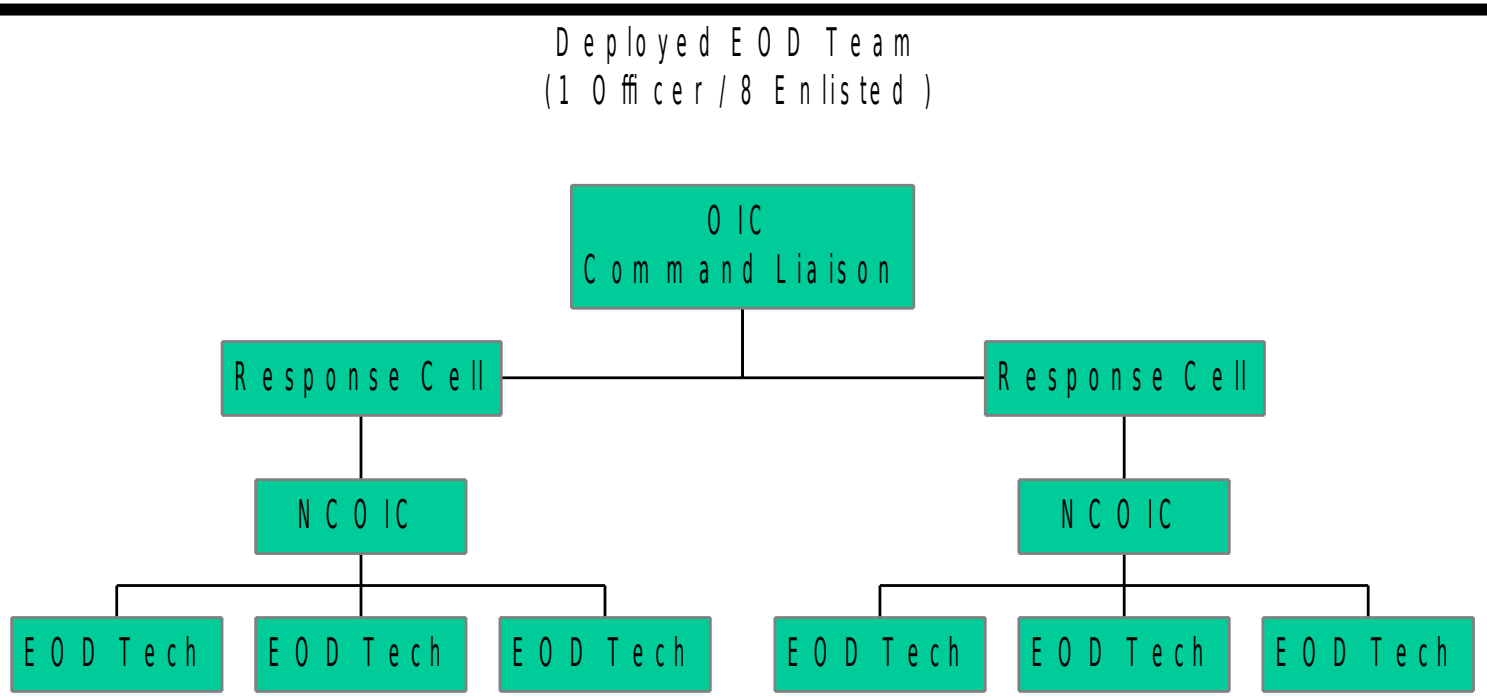
Building Block approach to EOD functional Team



# EOD Response Cell

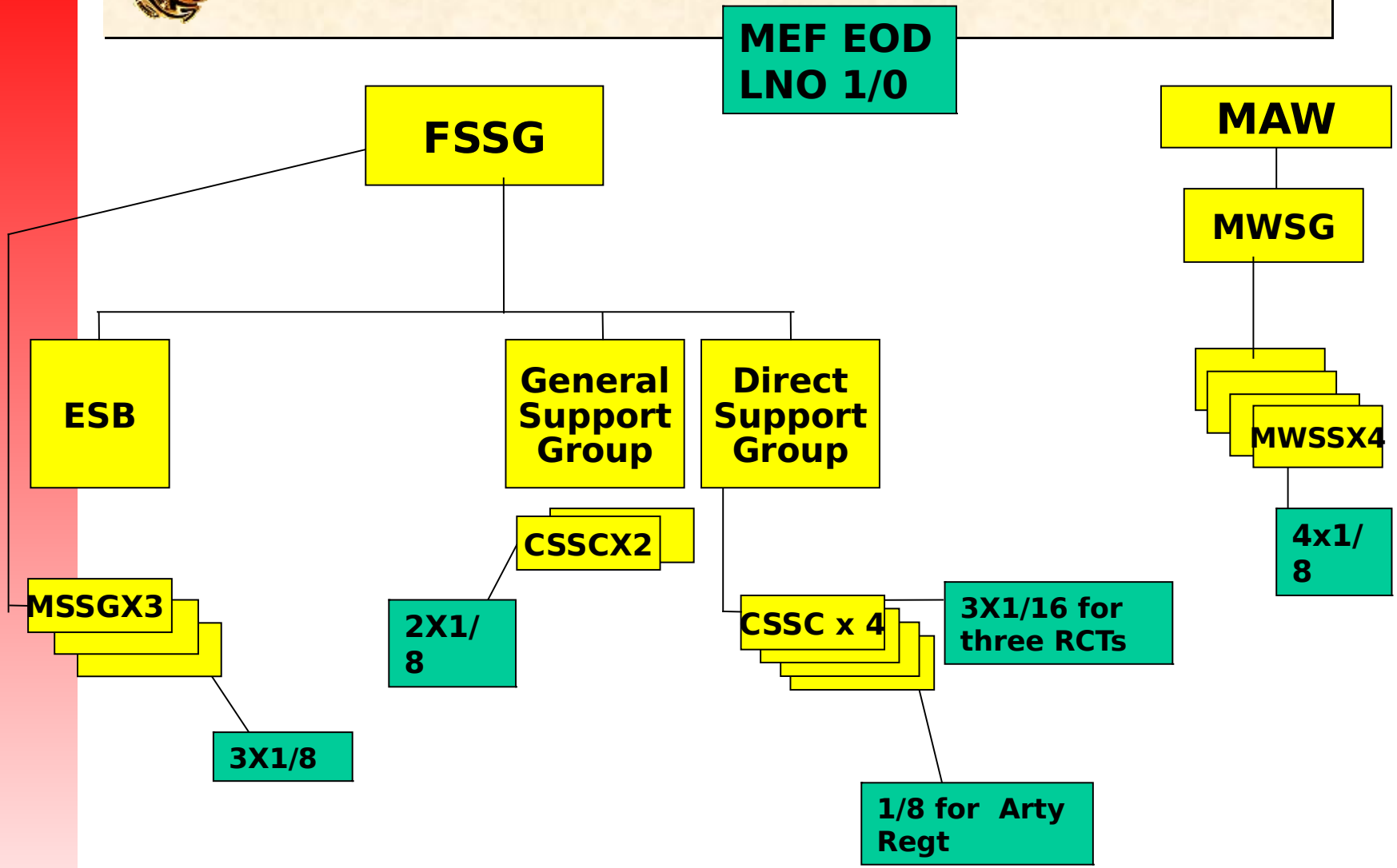


# EOD Full Team (1/8)

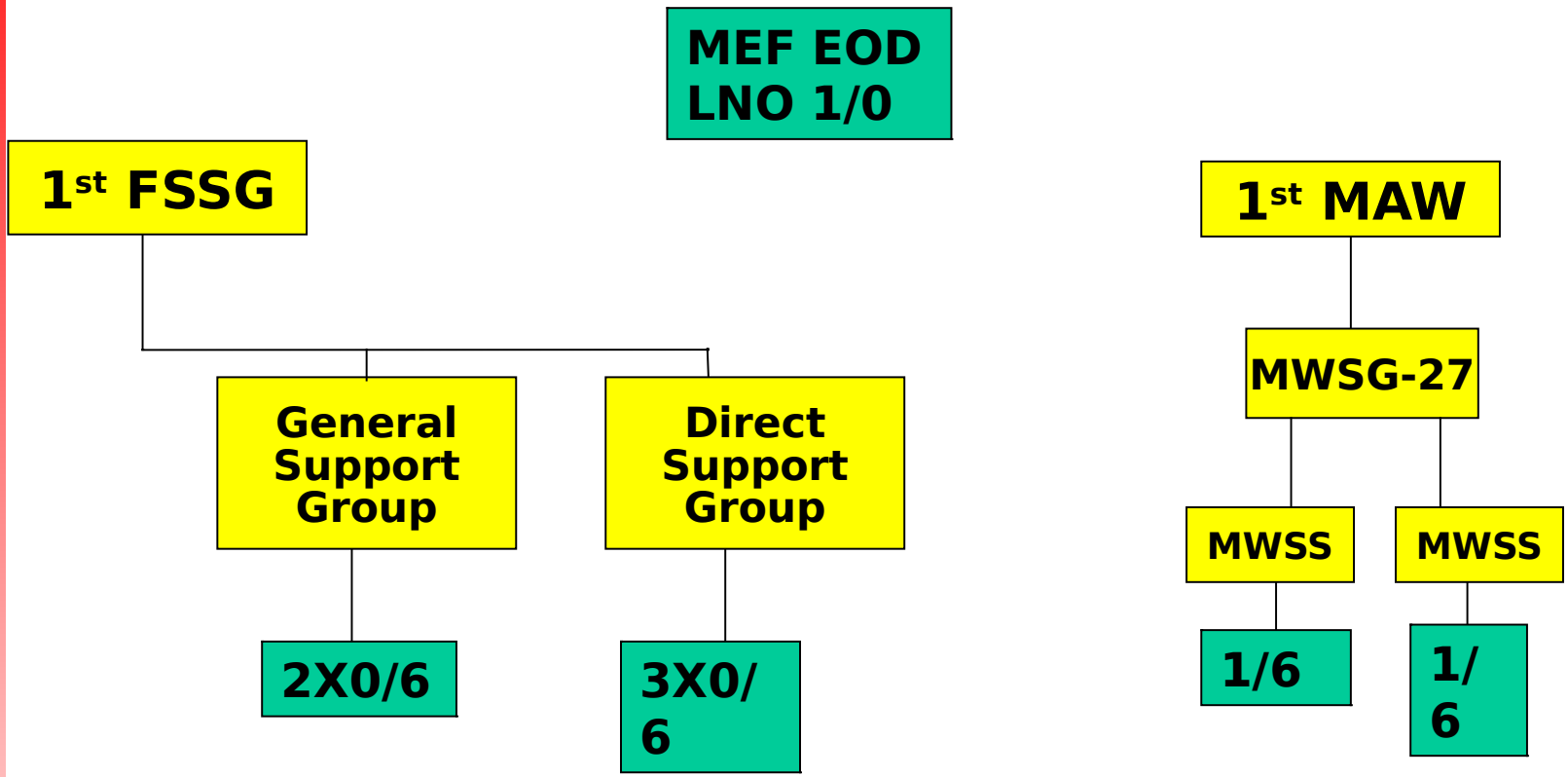



**Minimum Capability for Multiple IEDs and WMD**

# Post-OIF Wartime EOD Model



# OIF Phase II – 1
# EOD Teams (Reality)




**Navy EOD Team (1/7)**

**Delta of 5 EOD Officers and 42 EOD Techs**

# Base Station EOD FP/AT Requirements

- **Base/Station EOD tasked with full spectrum of FP/AT**
  - **Range UXO Cleanup**
  - **IED/WMD Response**
  - **First Responder Agreements with local municipalities**
- **24 hour alert requirements**

# Solution

**Insufficient EOD capability can only be fully remedied by a substantial increase in EOD structure. Resulting EOD capability could be employed more effectively where and when needed to counter WMD/IED/UXO threat to all MAGTF elements.**

# Courses of Action

**COA 1: Increase EOD structure, establish MarFor/MEF Staff Officers and mass EOD capability into a single unit within each MEF.**

**COA 2: Increase EOD structure, establish MarFor/MEF staff officers, and maintain current organization.**

**COA 3: Mass EOD capability into a single unit within each MEF, establish staff officers at MF/MEF and maintain current level of EOD structure.**

# Option 2 MarFor Revised EOD Requirements (16 Officers / 137 Enlisted )

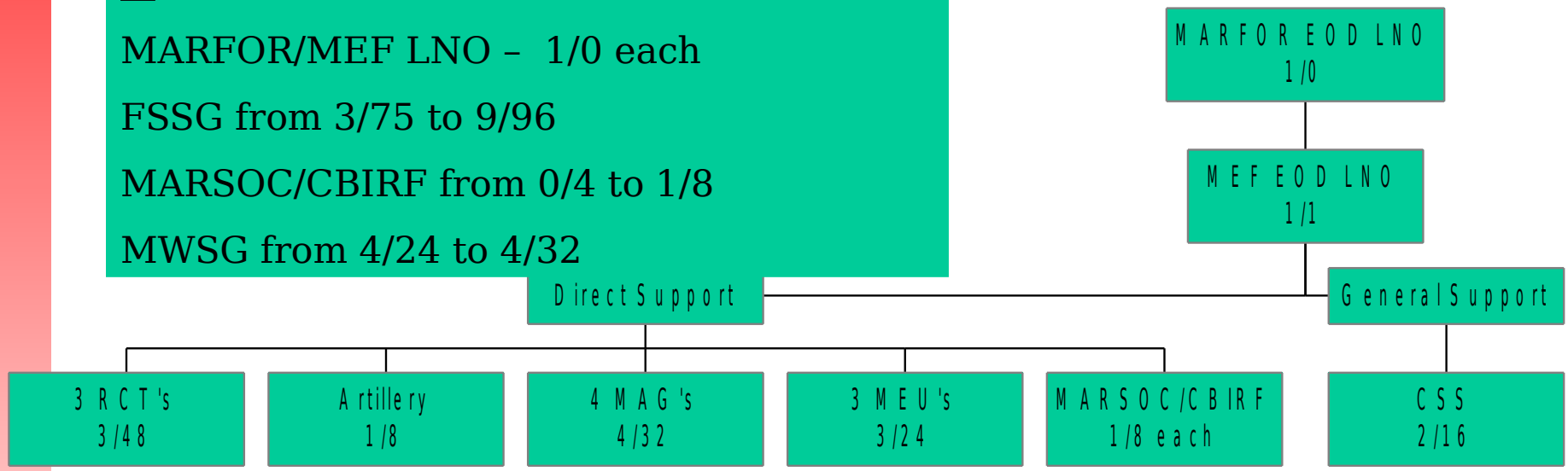
## Increase to T/O from Option 2

MARFOR/MEF LNO – 1/0 each

FSSG from 3/75 to 9/96

MARSOC/CBIRF from 0/4 to 1/8

MWSG from 4/24 to 4/32



# III MEF Revised EOD Requirement (10 Officers / 89 Enlisted )

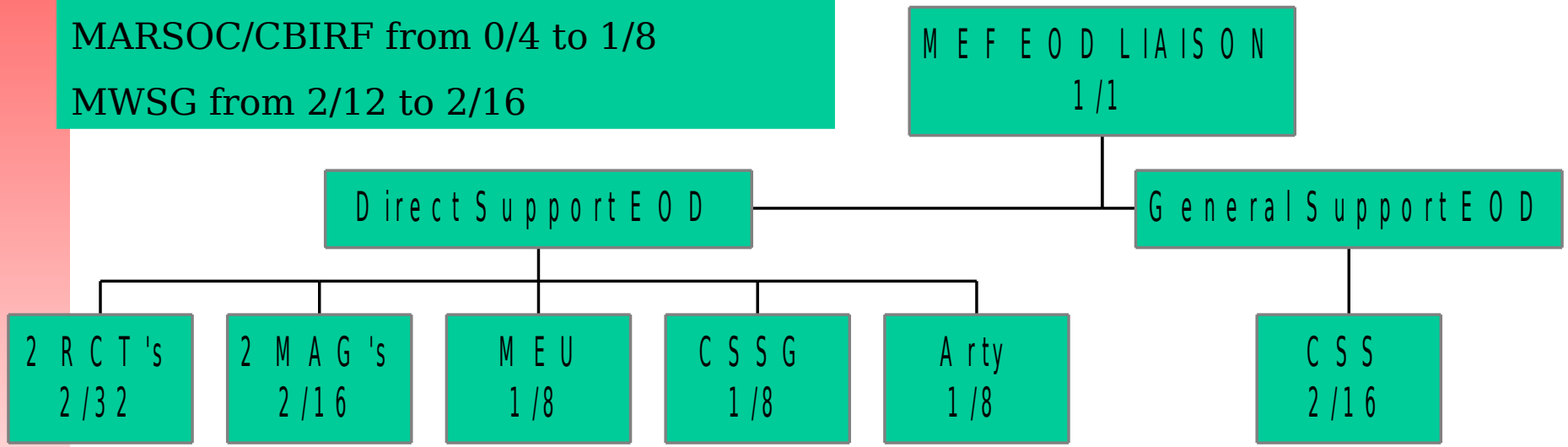
**Increase to T/O from Option 2**

MARFOR/MEF LNO – 1/0 each

FSSG from 1/28 to 7/72

MARSOC/CBIRF from 0/4 to 1/8

MWSG from 2/12 to 2/16



# Supporting Establishment Revised EOD Requirement

## Plusups are in Green

| | | | |
|---|---|---|---|
| MCB Camp Pendleton | 1/8 +2 | MCAS Cherry Point | 1/8 +2 |
| MCAS Iwakuni | 1/8 +2 | MCB Camp Lejeune | 1/8 +2 |
| MAGTFTC 29 Palms | 2/16 +1/10 | Camp Fuji | 0/4 |
| MCB Quantico | 1/8 +2 | MCAS Miramar | 1/8 +2 |
| MCBH Kaneohe | 1/8 +2 | MCAS Beaufort | 1/8 +2 |
| *MCB Camp Butler | 1/8 1/8 +2 | MCAS Yuma | |
| | | TOTAL | 12/100 |

# Supporting Establishment Revised EOD Requirement (cont'd)

| | | | | |
|---|---|---|---|---|
| WTBN 3/8 | 1/3 | NAVSCOLEOD | | |
| JTFFA 1/4 | 0/2 | NAVEODTECDIV | | |
| DIA | 0/1 | MARCORSYSCOM | | 0/1 |
| DTRA | 4/0 | LPE | 1/1+1 | |
| | | | TOTAL | |
| 10/20 | | | | |

# Addl EOD Structure Requirements

| Current Structure | COA 1 | COA 2 | COA 3 |
|---|---|---|---|
| 40/338 | 59/442 | 64/483 | 45/338 |
| Uncompensated Delta | 19/104 | 24/145 | 5/0 |
| Additional Equipment Sets | Five ($2842K) | Eight ($4546K) | Zero |

# Compensatory Structure Potential

- Competitive Sourcing Efforts
  - Facility Marine Outsourcing 34/268
  - Fabric Repairmen Outsourcing 0/99

# 30 December MROC Decision

- Approved additional 15 EOD School seats for next four years
- Directed I&L to support OIF II through:
  - Use of other Services EOD assets
  - Realignment of organic Marine EOD to support I MEF
- Report back to MROC Nlt 30 Dec 2004

# Engineer Master Plan Efforts

# Vision

- **MAGTF Engineers will enable the Execution of all Aspects of developing expeditionary warfighting concepts**

# Assumptions

- **Marine Corps has a requirement beyond 2015 to provide engineering capability to the MAGTFs in support of EMW evolving concepts**

- **The Marine Corps will make an institutional commitment to develop and execute an Engineer Master Plan designed to obtain the required engineer capabilities for the 2015 period and beyond**

# Background

- **Key Capability Gaps**
  - **Mine Counter Measures**
  - **Mismatch of capabilities and core competencies. Too large a focus on construction vice mobility**
  - **Bridging assets incompatible with EMW.**
  - **Perceived redundancies between USMC engineer organizations and Seabees.**
  - **Antiquated fuel and water capabilities.**
  - **Lack of self-mobile/readily transported equipment**

# Background (Cont)

- **Engineer Unit Responsibilities**
  - **CEB/ESB/MWSG Missions Differ Widely:**
    - **CEBs Carry GCE Mob/Counter Mob Mission**
    - **ESBs Focus on wide variety of mobility, survivability, and deliberate engineering functions**
    - **MWSSs Focus on Airfields**
  - **Three Engineer OAGs (Division/Group/Wing). Each reports to a separate advocate**
  - **Disjointed Action / No Unifying Engineer Master Plan**

# Background (Cont)

- Multiple Advocacy
  - DC I&L is the Official Engineer Advocate
  - DCs for PP&O, Aviation, CE Assume Advocacy for Engineer Programs and Matters that Primarily Affect Their Mission Areas
  - Advocate for a particular Engineer program of record depends on the program
- Marine Corps ECOE Role?

# Background (Cont)

- Engineer relationships with Other Services
  - USMC Must Leverage and Integrate with Other Service Programs
    - Navy: Deliberate Construction Capability
    - Army: Common Interests Ashore
    - Air Force: Airfield related

# Scope and Key Components

- Identify/Confirm Key Engineer Master Plan Players and their Specific Roles
- Evaluate Engineer Unit Missions, Structure and Equipment
  - Recommendations for Other MOS Communities
- Identify Near-, Mid- and Far-Term Measures Across DOTMLPF Spectrum
  - Near-Term: FY 05 - 08
  - Mid-Term: FY 09-12
  - Far-Term: FY 13+

# Scope and Key Components

- Coordinating instructions for working with the Navy, Army, Air Force
- Plan of Action & Milestones for Engineer Master Plan Execution
- Timeline:  Complete Master Plan within 360 Days of Charter Approval

# Recommendations

- **MROC Charter Engineer Master Plan Working Group**
- **Assign DC, I&L Lead Agent for Master Plan Development**

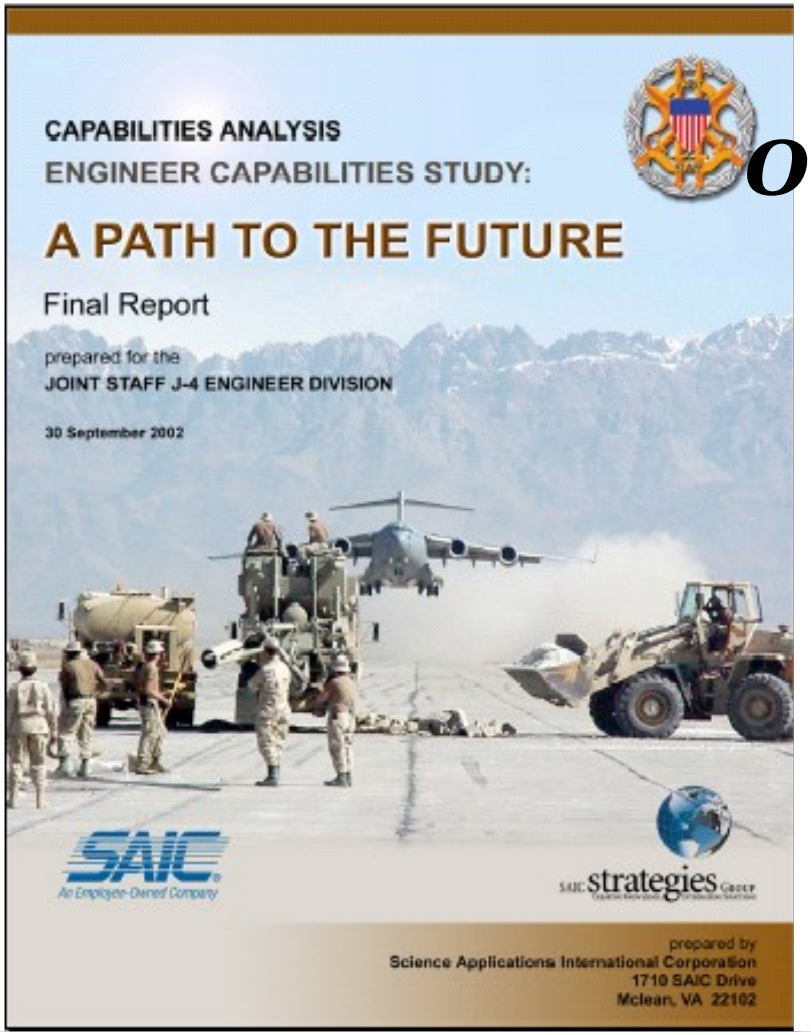
# Status as of 12 August

- Briefed through Marine Requirements Board
- Sent out to MROC Committee as an Electronic (paper) MROC

- Expect approval shortly

# Joint Operational Engineer Board

# Joint Engineer Capabilities Study




***One Perspective…***

# 22 ECS Recommendations

## TRANSFORMATION

**33** **Joint Engineer Transformation GO/FO Conference**

**33** Scenarios-based Quantitative Analysis to Determine "Right Dimensions" of Engineer Force

33 Engineer Element for Joint Experimentation

32 Determine Requirements and Assign Responsibility for Guiding Engineer Transformation

23 Modularization of Army Combat Heavy Engineers

16 Construction Material Availability

## TRAINING/DOCTRINE

**19** **Joint Engineer Module in Service Engineer Advanced Courses**

## CONTRACT SUPPORT

**14** Quality Assurance for Contracted Engineer Support

14 Outsourcing Technical Engineering Tasks

## INTEROPERABILITY/JEPES

**28** **Carbon Fiber Temporary Fixed Bridge Kits**

**27** **Engineer Planning Tool**

27 Engineer Execution Tool

27 Engineer Database in GCSS

27 Korean Temporary Fixed Bridge Kits

23 Data Collection/Analysis Capability

**18** **Contingency Funding Guidelines**

**14** Modernization of Construction Techniques, Equipment, Material

11 Standardized Bed Down Facility Sets

## EQUIPMENT

**26** Engineer PREPO Equipment Mini-Depots

20 Track Civilian Heavy Equipment Transports in the Data Collection & Analysis Capability

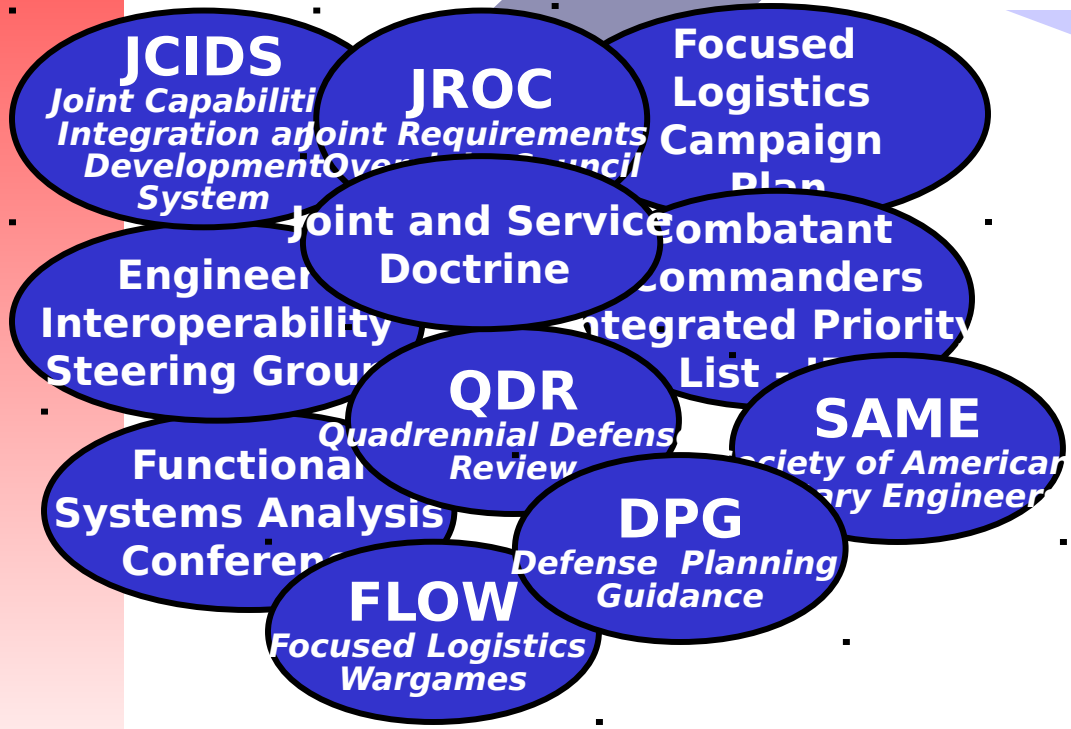
20 "Lease -vs- Buy" Concept

18 Judicious Use of PREPO and WRM Assets

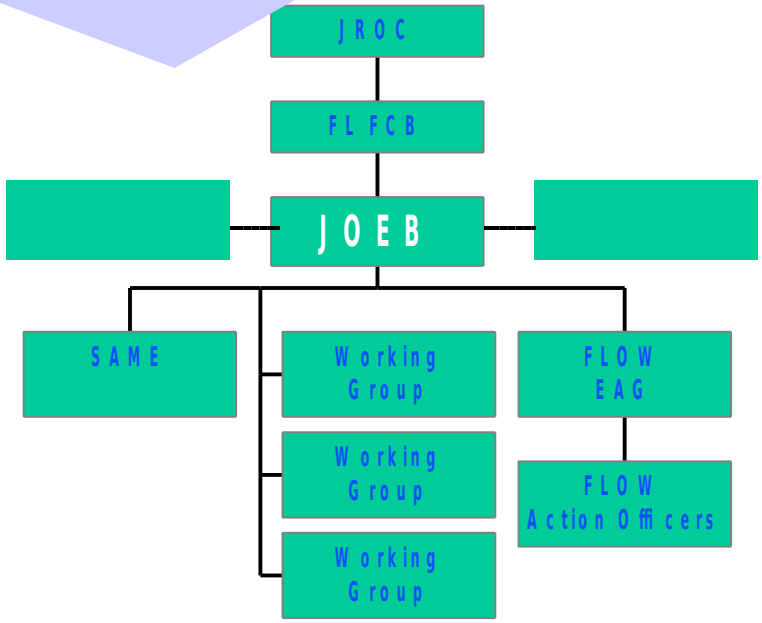
# JCS Goal

## Engineer Capabilities Study (ECS) --

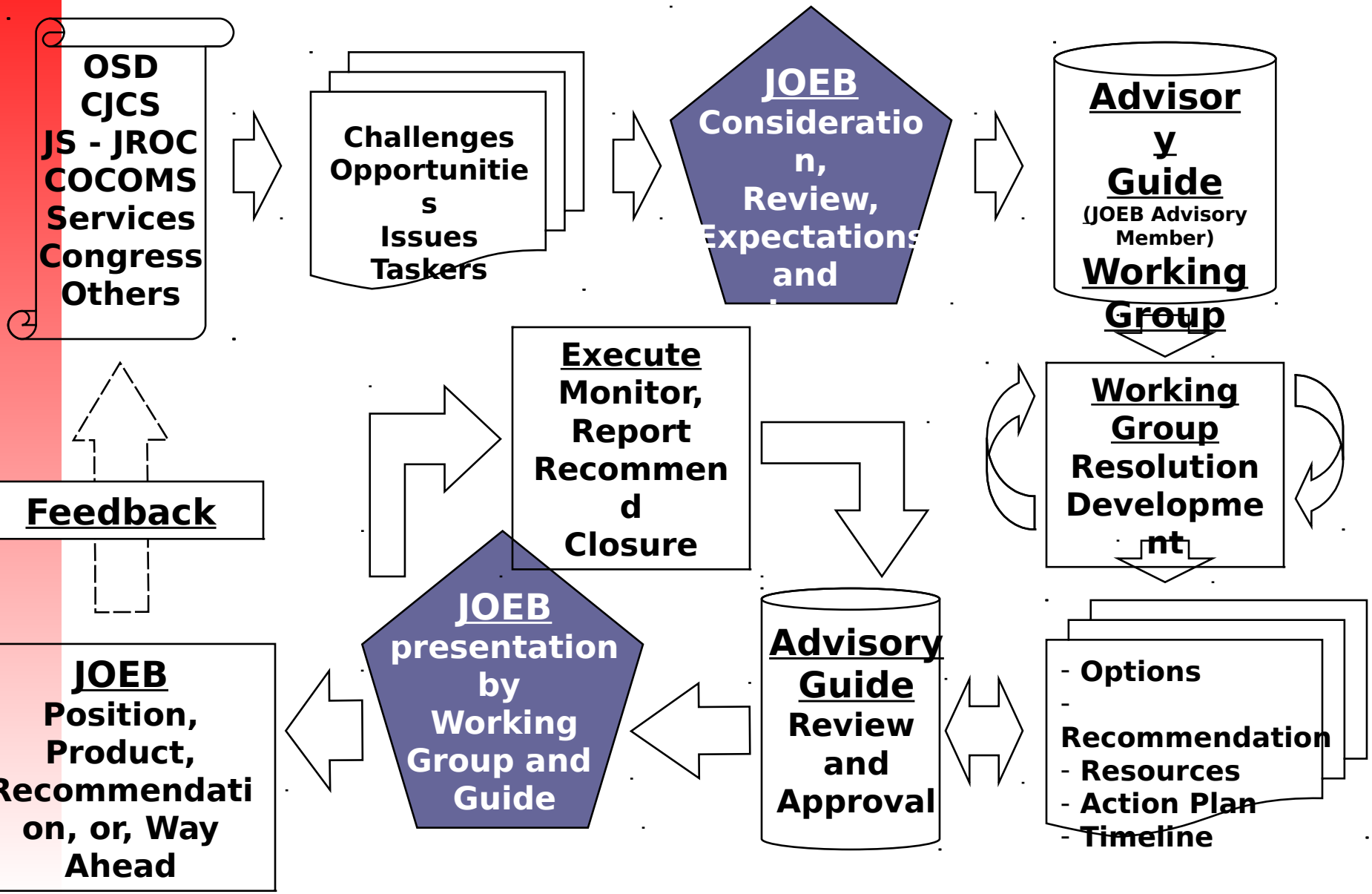
***Found:***




***Recommends:***



# JOEB Process



# Training and Doctrine Working Group

- Review and Update Current Joint Engineer Doctrine (3-34 and 4-04)
- Joint Engineer Module/Curricula in Service Engineer Advanced Courses
- Review Combatant Command Engineering Directives
- Review and Update Service Doctrine
- Evaluate Engineer Training, Identify/Eliminate Shortfalls

# Transformation Working Group

Development of Joint Engineer Concept

- Engineer Element for Joint Experimentation
- Contingency Funding Guidelines – current and future years
- Develop Process to Assess and Manage Engineer Proposals Entering Joint Capabilities Integration and Development System (JCIDS)

# Interoperability Working Group

Engineer Planning Tool

- Engineer Execution Tool
- Engineer Database in GCSS
- Data Collection/Analysis Capability
- Standardize Beddown Facility Sets
- Cross-Service Modularization (expand from Modularize Combat Heavy Army units)

# Capabilities Working Group

- Roles and Missions
- Judicious use of PREPO and WRM
- Engineer Pre-positioned Equipment Mini-depots
- Outsourcing Technical Engineer Tasks
- Modernization of Construction Techniques, Equipment and Material

  Bridging Capabilities (includes, but not limited to Korean Temporary Fixed Bridge Kits and Carbon Fiber Temporary Fixed Bridges)

  Define Joint Engineer Capabilities Elements

ngineering Experimentatio

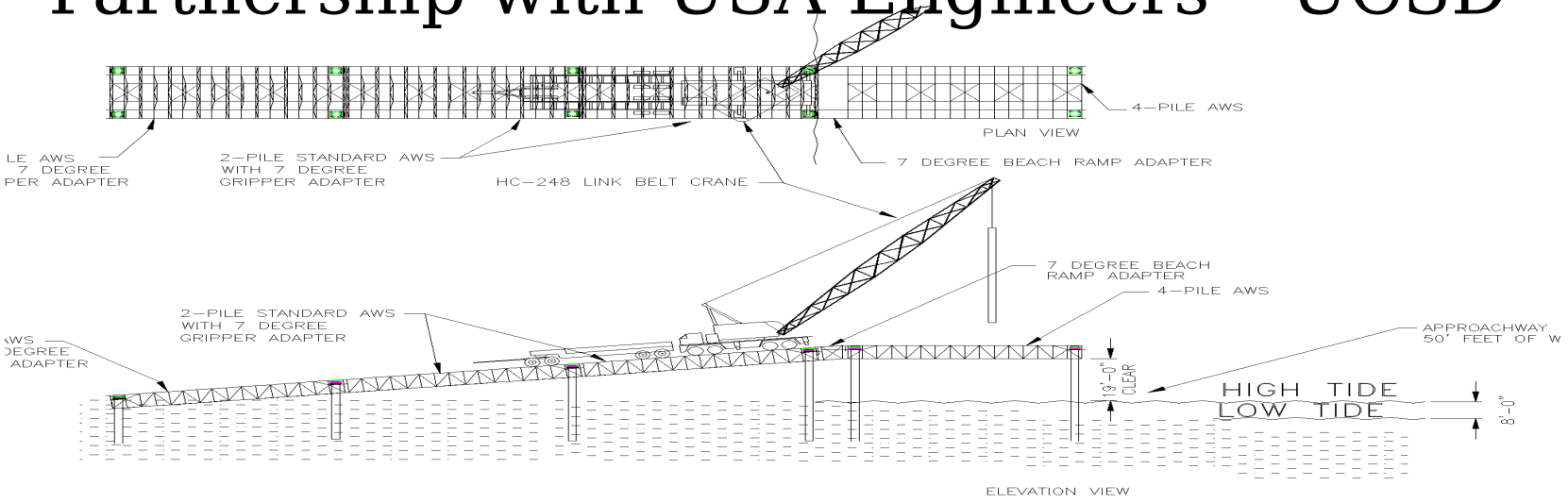
# Dust Abatement

- Initiative and persistence to develop a capability

# Lightweight ROWPU Test

# Composite Bridging

- Submitted by I MEF Seabee LNO
  - Potentially fills Non-Std Bridging Requirement
  - Capability to manufacture bridge members and parts onsite
- ONR funds $350K through 31Dec03 – extended an extra year
- Partnership with USA Engineers – UCSD



# Change Detection Work Stations Output of JACACTD and IED Detection Efforts